

ACC NR: AP7006233

SOURCE CODE: UR/0076/67/041/001/0003/0007

AUTHOR: Tsivenko, V. I.; Myasnikov, I. A.

ORG: Scientific Research Physicochemical Institute im. L. Ya. Karpov (Nauchno-issledovatel'skiy fiziko-khimicheskiy institut)

TITLE: Electric conductivity of zinc oxide thin films during chemisorption and photolysis of ammonia

SOURCE: Zhurnal fizicheskoy khimii, v. 41, no. 1, 1967, 3-7

TOPIC TAGS: zinc oxide, chemisorption, ammonia, photolysis, *electric conductivity*

ABSTRACT: The electric conductivity of zinc oxide (a typical n-type semiconductor) was studied during chemisorption of ammonia at low pressures (up to 1 mm Hg) on ZnO samples which were first heated in a vacuum at 350 °C. Upon introduction of NH₃ into the vessel containing ZnO, the electric conductivity of the latter decreased (at 20-300 °C). This indicates that the NH₃ molecule adsorbed on the ZnO surface is an acceptor of electrons, which are the current carriers. The dependence of stationary values of the electric conductivity of ZnO on the NH₃ pressure at 20 and 250 °C was determined. The dependence of the electric conductivity kinetics on the temperature and pressure was studied, and the apparent activation energy of the electric conductivity of ZnO during adsorption on NH₃ was found to be ~1.4 kcal/mole. A change in

Card 1/2

UDC: 541.13+541.14+541.183

ACC NR: AP7006233

the conductivity of ZnO under conditions of photolysis of ammonia and of the mixture $\text{NH}_3 + \text{Ne}$ was observed; this change is due to the adsorption of H atoms and NH_2 radicals on ZnO. Orig. art. has: 4 figures and 3 formulas.

SUB CODE: 20/07/ SUEM DATE: 23Jun65/ ORIG REF: 005/ OTH REF: 003

Card 2/2

MYASNIKOV, I. N.

PA 32/49T14

USSR/Electronics

Sep 48

Voltage Regulators

Regulators, Electronic

"The Selection of an Automatic Carbon Voltage
Regulator," I. N. Myasnikov, M. Yu. Posherstnik,
Cheboksarskiy Instr Plant, Min of Elec Ind, 1½ pp

"Vest Elektro-Prom" No 9

Explains procedure for calculating basic parameters
for selection of subject regulators.

32/49T14

BORISOV, Ye.F., dots.; BREGEL', E.Ya., prof.; BUKH, Ye.M., dots.;
VASHENTSEVA, V.M., dots.; GOLEVA, Yu.P., kand. ekon. nauk;
GOLEVA, A.P., kand. ekon. nauk; DEMOCHKIN, G.V., dots.;
DONABEDOV, G.T., kand. ekon. nauk; YERMOLOVICH, I.I., dots.;
KALYUZHNYI, V.M., dots.; KORNEYEVA, K.G., dots.; KUZNETSOVA,
A.S., prof.; MIROSHNICHENKO, V.S., dots.; MYASNIKOV, I.Ya.,
kand. ekon. nauk; PIKIN, A.S., dots.; SIDOROV, V.A.; SMIRNOV,
A.D., dots.; SOLOV'YEVA, K.F., dots.; SOROKINA, I.F., dots.;
TARUNIN, A.F., kand. ekon. nauk; KHARAKHASH'YAN, G.M., prof.;
MENDEL'SON, A.S., red.; SHVEYTSEV, Ye.K., red.; ROTOVA, R.S.,
red.; GARINA, T.D., tekhn. red.

[Economics of socialism] Politicheskaya ekonomiya sotsializ-
ma. Moskva, Gos.izd-vo "Vysshaya shkola," 1963. 476 p.
(MIRA 17:2)

MYASNIKOV, K.A.; SHUB, I.S.; GLADYSHEVA, S.S., redaktor; LYUDKOVSKAYA, N.I..
tekhnicheskiiy redaktor

[Principles governing the designing of glass factories for a diploma]
Osnovy diplomnogo proektirovaniia stekol'nykh zavodov. Moskva, Gos.
izd-vo lit-ry po stroit. materialam, 1955. 471 p. [--- Collection
of designs; a supplement to the text] Al'bom chertezhei; prilozhenie
k uchebniku. 1955. 57 p. (MLRA 9:9)
(Glass manufacture--Study and teaching)

MYASNIKOV, K. A.

AUTHORS: Myasnikov, K. A., and Gaysinskiy, V. L.

72-12-1/11

TITLE: New Technique in the Projects of Giprosteklo (Novaya tekhnika v proyektakh Giprosteklo).

PERIODICAL: Steklo i Keramika., 1957,¹⁴ Nr 12, pp. 1- 6 (USSR)

ABSTRACT: The technical equipment of the glass works was considerably increased. In 1948-1957 a thorough reorganization of the pyrometric aggregates of the glass works for sheet glass was carried out, in adapting the same to a direct feeding of the machines with glass mass from the melting furnace. For the first time this was carried out in 1948, in the glass works of Gusevskiy imeni Dzerzhinskiy and afterwards subsequently in the others whereby for the heating of the furnaces section regenerators were used. The new furnace basins are planned with a width of 8 m and equipped with an automatic control and regulating system. By this the daily output of the furnaces was increased from 70-90 tons to 120 - 150 tons which did not necessitate the construction of new glass works for the time being. The institute Giprosteklo worked out typical schemes of the mechanization of work of the machines, whereby mechanisms of the P K B glass institute were used. In table 1 the old and newly planned works are compared to one another. The project worked out by the institute of works for poli-

Card 1/3

New Technique in the Projects of Giprosteklo.

72-12-1/14

shed glass on the basis of the assembly line -WC - 500 was carried out in the Gusevskiy glass works imeni Dzerzhinskiy and in 1953 put in operation. The design of the assembly line WC - 500 as well as WC - 1000 was worked out by the collective of the G S P K B under the leadership of V. I. Chemm and A. I. Yelizarov (reference 1). The new department Sh P S is destined for the treatment of sheet glass with the measurements 1,6 x 2,4 m. The project of the works Saratov for technical glass is based on the assembly line WC -1000 whereby it was adapted from a cyclical working regime to a continuous one, the measurements of the sheet glass were increased up to 3 x 4,5 m. In current year the institute Giprosteklo has worked out the project of a still greater factory for polished glass for the Bashkirian Republic (figure 1 and 2) in which a simultaneous bilateral treatment of a continuous glass band of a width of 3 m is provided as well as a gas-electric heating of the furnaces and an almost complete automatization of all working processes. The provided output amounts to 3 million tons of polished glass, 6 million m² of window glass etc. In the works "Proletyriy" a project of the reform of the department Sh P S was worked out (figure 3) which provides an increase of the output of cut glass of from 100,000 to 800,000 m². The effectiveness of the projects of the Giprosteklo is shown in table 2. It is provided to adapt the Gor'kiy glass works to panoramic glass (panoramnoye

Card 2/3

New Technique in the Projects of Giprosteklo.

77-11-13/1

steklo). In 1947 a project for the adaption of the works of Konstantinovich "Avtosteklo" was worked out under the leadership of I. I. Kitaygorodskiy and a plant for the sintering of foam glass (perosteklo) was constructed. The institute also planned and carried out an automatic experimental plant for foam glass (АЭП-1) (figure 4) in the glass works of Gomel. The technical-economic values of this plant are given in table 3. In table 4 the technical and economic values of 3 new projects are given (Ivotsk, Moscow, and Saratov). Further projects for the new production of glass tubes and glass tare for the medical industry were worked out as well as great works carried out for the gasification of the glass works. Furthermore electric and gas-electric melting furnaces are planned in order to increase the specific efficiency as well as the quality of the glass. There are 5 figures, 4 tables,

AVAILABLE: Library of Congress.

Card 3/3

15(2), 15(6)

AUTHORS:

Kitaygorodskiy, I. I., Butt, L. M.,
Gaysinskiy, V. L., Myasnikov, K. A.

SOV/72-59-12-6/19

TITLE:

The Choice of an Expedient Design for a Plant Producing Foam Glass ✓

PERIODICAL:

Steklo i keramika, 1959, Nr 12, pp 15 - 21 (USSR)

ABSTRACT:

The Soviet method of producing foam glass from powders elaborated by the Kafedra stekla MKhTI imeni Mendeleyeva (Chair of Glass, MKhTI imeni Mendeleyev) found world-wide appreciation. At present, the Gomel'skiy stekol'nyy zavod (Gomel' Works) produces foam glass in the shape of blocks of various sizes in accordance with the above method. In the Institut stekla (Institute of Glass) experiments were made with the manufacture of special parts of foam glass for the insulation of pipe lines. In the USSR the production of foam glass develops slowly, a fact explained by the great production cost. The authors of the present paper, however, refuted this assumption on the basis of data supplied by the Konstantinovskiy zavod "Avtosteklo" (Konstantinovka Works "Avtosteklo"), the Ivotskiy zavod (Ivot Works) and the Gomel'skiy zavod (Gomel' Works) et al. ✓

Card 1/3

The Choice of an Expedient Design for a Plant Producing SCV/72-59-12-6/19
Foam Glass

In the course of the past ten years a number of various plants were designed, constructed and tested by Soviet engineers. The displacing possibilities of molds in the furnace are shown in figures 1-5. Since 1952 experiments have been made in the USSR concerning the production of foam glass as a continuous band without molds. In 1957-1958 an automatic experimental plant AUP-1 was tested in the Gomel' Works the design of which was worked out in the Giprosteklo upon suggestions by the authors' collective L. M. Butt, M. I. Steshenko, V. L. Gaysinskiy, V. A. Il'inskiy, K. A. Myasnikov, I. S. Blagobrazov, and L. S. Koleshko. A scheme is given in figure 6. Experiments with the above plant were made by the Gomel' Works, Giprosteklo, the Institute of Glass and its ~~Proyektno-konstruktors-~~ koye byuro (Planning and Design Bureau) (see Ref 1). The temperature curve of the furnace is plotted in figure 7. At present the Giprosteklo is working out the AUP-2 automatic plant. In figure 8 the scheme of a conveyer belt appliance is given which has been elaborated by I. I. Kitaygorodskiy, B.I. Borisov, L. M. Butt, and M. I. Kokon'. The ~~Proyektno-konstruktorskoye~~ byuro Instituta stekla (Planning and Design Bureau of the Glass

Card 2/3

The Choice of an Expedient Design for a Plant Producing SOV/72-59-12-6/19
Foam Glass

Institute) is working out an assembly based on the foam glass formation on heat-proof steel conveyer belt. The productiveness of the establishment of departments and works for the production of foam glass may be seen from the table. In conclusion the authors consider plants producing foam glass without molds in the shape of a continuous band as the most perfect and prospective ones since they permit the automation of production processes. ✓
Until a typical industrial conveyer belt plant will be created it is recommended to build continuous type furnaces for the production of foam glass, which have stood the test. There are 8 figures and 1 table.

Card 3/3

MYASHNIKOV, Konstantin Akimovich, dotsent; SHUR, Ivan Semilovich, dotsent;
REZNIKOV, M.I., nauchnyy red.; KIZEL'SHTAYN, D.S., red.izd-va;
TEMKINA, Ye.L., tekhn.red.

[Mechanization of industrial processes in glass plants] Mekhani-
zatsiya proizvodstvennykh protsessov na stekol'nykh zavodakh.
Moskva, Gos.izd-vo lit-ry po stroitel'stvu, arkhitekture i stroit.
materialam, 1960. 243 p. (MIRA 13:5)
(Glass manufacture)

MYASNIKOV, K.A.

Choosing a technical layout for machine and furnace plants and
for cutting plants. Stek.1 ker. 18 no.8:4-11 Ag '61.

(Glass factories)

(MIRA 14:8)

MYASNIKOV, K.P.

Making dental casts without trimming the base. Stomatologia no.5:52-53
S-0 '55. (MLRA 9:2)

(PLASTER CASTS, DENTAL)

MYASHNIKOV, K. P.

Interrelation between stomatological treatment of the oral
cavity and prosthesis. Stomatologiia 35 no.4:57 J1-Ag '56
(MLRA 10:4)

(DENTAL PROSTHESIS) (STOMATOLOGY)

MYASNIKOV, Konstantin Viktorovich; RUDENKO, Vasiliy Vladimirovich;
BURTSEV, L.I., kand. tekhn. nauk, retsenzent; KOVALEV, I.A.,
kand. tekhn. nauk, otv. red.

[Using hardening fillers during the mining of mineral deposits]
Primenenie tverdeiushchei zakladki pri razrabotke rudnykh me-
storozhdenii. Moskva, Izd-vo "Nedra," 1964. 121 p.

(MIRA 17:4)

MYASHNIKOV, K.Ya., inzh. (Novocherkassk)

Modernisation of circuits and equipment of EB electric
locomotives. Elek.i topl.tiaga no.7:32-36 J1 '60.
(MIRA 13:8)

(Electric locomotives)

EXCERPTA MEDICA Sec. 6 Vol. 11/8 Aug. 57
MYASNIKOV

4967. MYASNIKOV L.A. Hosp. Therap. Clin., 2nd Med. Inst., Moscow. The influence of various neurotropic substances on the cholesterolaemia of arteriosclerotic patients (Russian text) KLIN. MED. (Mosk.) 1956, 6 (65-69) Illus. 4

A study was made of the influence of a number of neurotropic substances on cholesterolaemia. The blood level of free cholesterol and also of cholesterol ester was measured in 96 patients both before and after doses of the following drugs: amytal nitrate (0.3 g.), chloral nitrate (1.0 g.), phenamine (0.92 g.), and caffeine (0.3 g.). Amytal nitrate and chloral hydrate lowered the total blood cholesterol level by 25-33 mg./100 ml., whereas phenamine and caffeine raised it on the average by 25 mg./100 ml. It follows therefore that substances depressing the activity of the CNS lower the blood cholesterol level and that stimulants of the CNS raise the level. The level of cholesterol ester remained constant. The experimental results indicate the role of a nervous factor in the regulation of the blood lipid level.

Guseva - Moscow

MYASHIKOV, L.A.

Digitoxin treatment of circulatory insufficiency. Sov.med. 20
no.2:54-58 F '56. (MIRA 9:7)

1. Is gosital'noy terapevticheskoy kliniki (dir.-prof. P.Ye.
Inomskiy) II Moskovskogo meditsinskogo instituta imeni I.V.Stalina
(CARDIOVASCULAR DISEASES
circ.insuff., ther., digitoxin)
(DIGITALIS, ther. use
digitoxin, in circ. insuff.)

MYASNIKOV, L. A. Cand Med Sci -- (diss) "Effect of neurotropic remedies upon
blood lipoids ^{during} ~~in cases~~ of atherosclerosis." Mos, 1957. 11 pp (2nd Mos State
Med Inst im N. I. Pirogov), 200 copies (KL, 4-58, 86)

MYASHNIKOV, L.A.

Use of sodium amytal in coronary atherosclerosis. Sov. med. 21
no.7:70-77 J1 '57 (MIRA 12:3)

1. Iz gosital'noy terapevticheskoy kliniki (dir. - prof. P.Ye.
Lukomskiy) II Moskovskogo meditsinskogo instituta imeni I.V. Stalina).
(CORONARY DISEASES, ther.
amobarbital (Rus) in arteriosclerotic dis. (Rus))
(AMOBARBITAL, ther. use
coronary atherosclerosis (Rus))

GLEZER, G.A., kand.med.nauk; MYASNIKOV, L.A., kand.med.nauk

Effect of certain external factors on blood lipids. Kardiologia
1 no.3:35-38 My-Je '61. (MIRA 15:3)

1. Iz gosspital'noy terapevticheskoy kliniki (zav. - prof.
P.Ye. Lukomskiy) II Moskovskogo meditsinskogo instituta imeni
N.I. Pirogova i Tsentral'noy polikliniki (dir. N.I. Yermolov)
Ministerstva zdravookhraneniya RSFSR.

(CHOLESTEROL) (LECITHIN)
(ARTERIOSCLEROSIS) (STRESS (PHYSIOLOGY))

MYASNINOV, L.A., kand.med.nauk; PYATENKO, V.I.

Effect of anticoagulants on the blood lipid level in coronary
atherosclerosis. Sov.med. 25 no.7:31-35 J1 '61. (MIRA 15:1)

1. Iz gosital'noy terapevticheskoy kliniki (dir. - prof. P.Ye.
Lukomskiy) II Moskovskogo meditsinskogo instituta imeni N.I.Pirogova.
(CORONARY HEART DISEASE) (LIPIDS)
(ANTICOAGULANTS (MEDICINE))

MYASHNIKOV, L.A., kand.med.nauk

Use of diethyl-stilbestrol in atherosclerosis. Sov. m.d. 25 no.11:
90-95 N '61. (MIRA 15:5)

1. Iz gosspital'noy terapevticheskoy kliniki (dir. - chlen-korrespondent
AMN SSSR prof. P.Ye.Lukomskiy) II Moskovskogo meditsinskogo instituta
imeni N.I.Pirogova
(ARTERIOSCLEROSIS) (STILBENEDIOL)

MYASNIKOV, L. A., kand. med. nauk; PYATENKO, V. I.

Thyrototoxicosis and atherosclerosis. Terap. arkh. 34 no.4:57-61
'62. (MIRA 15:6)

1. Iz gosspital'noy terapevticheskoy kliniki (dir. - prof. P. Ye. Lukomskiy) II Monkovskogo meditsinskogo instituta imeni N. I. Pirogova.

(HYPERTHYROIDISM) (ARTERIOSCLEROSIS)

MYASNIKOV, L.A.; ZAYTSEV, V.F.

Effect of thyroidin on the distribution of 4-¹⁴C-cholesterol
in experimental atherosclerosis. *Kardiológia* 7 no.6:31-37
N-9'62. (MIRA 17:8)

1. Iz Instituta terapii i diet. - deystvitel'nyy chlen AN
SSSR prof. A.L. Myasnikov) Izd. SSSR.

MYASNIKOV, L.A.; ZAYTSEV, V.F.

Changes in the tissue cholesterol content in experimental atherosclerosis under the influence of thyroïdin. Biul. eksp. biol. i med. 55 no.4:47-49 Ap '63.

(MIRA 17:10)
1. Iz Instituta terapii (dir. - deystvitel'nyy chlen AMN SSSR A.L. Myasnikov) AMN SSSR, Moskva. Predstavlena deystvitel'nyy chlenom AMN SSSR A.L. Myasnikovym.

ZAITSEV, V.F.; MYASNIKOV, L.A.

A study of experimental atherosclerosis with the aid of labelled cholesterol — ^{14}C . Cor vana 5 no.2:114-119 '63.

1. Institute of Internal Medicine, Academy of Medical Sciences,
Moscow.

(ARTERIOSCLEROSIS)	(CHOLESTEROL)	(CARBON ISOTOPES)
(LIVER)	(ADRENAL GLANDS)	(BRAIN) (BIOCHEMISTRY)

MYASNIKOV, L.A.

Use of sex hormones in atherosclerosis. Sov. med. 47 no.11:
33-36 N '63 (MEA 18:1)

1. Iz gosital'noy terapevticheskoy kliniki (direktor - olen
korrespondent AN SSSR prof. P. Ye. Lukenskiy) II Moskovskogo
meditsinskogo instituta imeni N.I. Pirogova.

MYASNIKOV A.I., POSTNOV, Yu.V.

Weakening of the myocardiotoxic action of thyrocidin in experimental
alimentary hypercholesterolemia. Kardiologiya no. 1:25-26 '84,
MTRB 17.10.
1. Institut terapii (dir. deystvitel'nyy chlen AMN SSSR prof.
A.I. Myasnikov, AMN SSSR, Moskva.

ZAITSER, V.F.; MYASNIKOV, L.A.; KASATKINA, L.V.; LOBOVA, N.M.; SUKASOVA, T.T.

The effect of ascorbic acid on experimental atherosclerosis.
Cor Vasa 6 no.1:19-25 '64.

1. Institute of Internal Medicine, Academy of Medical Sciences,
Moscow.

*

ZAYTSEV, V.F.; MYASNIKOV, I.A.; SHEYKMAN, M.B.

Effect of ascorbic acid on the distribution of $^4C^{14}$ -labeled
cholesterol in tissues in experimental atherosclerosis. Kardiologiya
4 no.6:30-34 N-D '64. (MIRA 18:8)

1. Institut terapii (direktor - prof. A.L.Myasnikov) AMN SSSR, Moskva.

MYASNIKOV, L.A., prof.

Effect of insulin in experimental atherosclerosis. Biul.
eksp.biol. i med. 59 no.5:40-42 '65.

(MIRA 18:11)

1. Institut terapii (direktor - deystvitel'nyy chlen
AMN SSSR prof. A.L.Myasnikov) AMN SSSR, Moskva. Submitted
February 6, 1964.

MYASHNIKOV, L. I.

Penetration of metals by supersonic waves 1. 1.
Myashnikov, Leonid Metalloprof. 15, No. 1, 68 (1970),
Chem. Zvesti (USSR), 1, 3573. The method proposed de-
pends upon the fact that supersonic waves, which readily
penetrate homogeneous metals, upon emerging from the
metal produce a curly pattern on the oil-air interface
created by coating the metal with transformer oil. If
there is inhomogeneity in the metal (cracks, flakes), then
such flaws, which are impervious to the supersonic waves,
can be detected by the presence of smooth areas on the oil
film. The apparatus used is described and its application dis-
cussed. M. G. Abramov.

MYASNIKOV, L. L.

Physics

"Physical studies of the sounds of Russian speech,"
Iz. Ak. Nauk SSSR Ser. Fiz., 13, No. 6, 1949.

Technology, I.I.

Technology

high-frequency drying of yarn Leningrad, 1951

Monthly List of Russian Accessions, Library of Congress, August 1952. Unclassified.

MYASNIKOV, L. L.

3

J 14575* (Magnetic Dispersion of Sound for Longitudinal Vibrations.) O magnitnoi dispersii zvuka pri pradol'nykh kolebaniyakh. L. L. Myasnikov and G. K. Ufimtsov. Doklady Akademii Nauk SSSR, v. 98, no. 4, June 1, 1954, p. 729-731. Effect of magnitude of magnetic induction, sheet thickness, and distribution of eddy currents. Graphs. 2 ref.

MYASNIKOV, L. L.

USSR/Physics

Card : 1/1

Authors : Myasnikov, L. L., and Ulyanov, G. K.

Title : Magneto-acoustic effect in para- and diamagnetic metals

Periodical : Dokl. AN SSSR, 96, Ed. 5, 967 - 969, June 1954

Abstract : The article deals with an acoustical magnetic effect observed during magnetic dispersion studies in para- and diamagnetic metals. The effect consists of an increase of phase velocity of sound produced by metal torsional plates put into a constant magnetic field accompanied also by an increase in the sound absorption. Diagrams.

Institution : Ship Construction Institute, Leningrad

Presented by: Academician, A. N. Terenin, March 6, 1954

MYASNIKOV, L. L.

USSR/Physics - sound in magnet field

Card : 1/1

Authors : Myasnikov, L. L., and Ulyanov, G. K.

Title : Magnetic dispersion of sound during longitudinal oscillations

Periodical : Dokl. AN SSSR, 96, Ed. 4, 729 - 731, June 1954

Abstract : Magnetic dispersion of sound in dia- and para-magnetic metal discs and rods, during longitudinal oscillations, was observed. This dispersion was studied and a theory propounded. According to the theory, the main cause of the observed dispersion is due to the skin effect. The observed dispersion was slightly less than the theoretical. Two references. Graphs

Institution : The Leningrad Ship-Building Institute

Presented by: Academician, A. N. Terenin, March 6, 1954

Translation - M-270, 22 Mar 55

MYASNIKOV, I. I., doktor tekhnicheskikh nauk, professor (Leningrad)

~~*****~~
Leader in natural sciences today. Nauka i zhizn' 22 no. 4: 10-12
Ap '55. (MIRA 8:6)

(Physics)

Myasnikov, L. L.

✓ The half-widths of the absorption microradiowave lines of ammonia. A. A. Kolosov and L. L. Myasnikov. *Optika i Spektroskopiya* 1, 374-7 (1958). The effect of pressure on the half-widths of the lines in the microradiowave absorption spectrum of NH_3 was detd. in the range $2-3 \times 10^5$ cycles/sec. and $10^{-1}-10^{-2}$ atm. pressure. It was found that the half-width of the absorption line increases with increasing intensity which is in accord with the theoretical predictions. A study of the hyperfine structure of the absorption lines showed that the change in the half-width of the satellites is of the same order of magnitude as that of the principal line; this agrees with the theory.

L. Rowland Leach

RM

my

MYSENKOV, L. I.

Frequency Region.—D. K. Balabukha,
L. L. Myusnikov & E. N. Plotnikova.
(*Akust. Zh.*, July-Sept. 1956, Vol. 2, No. 3,
pp. 240-254.) The principles of an instru-
ment for the measurement of a.f. voltages of
the order of a few microvolts in the frequency
range 200 c/s-20 kc/s are discussed and
some practical details are given. The a.f.
voltage was modulated at 24 c/s by a
periodically varying capacitance in the
input stage of an a.f. amplifier. Various
detectors were used.

Myasnikov, L L

USSR/ Physical Chemistry - Molecule. Chemical Bond.

B-4

Abs Jour : Referat Zhur - Khimiya, No 3, 1957, 7216

Author : Klosov, A.A. and Myasnikov, L.L.

Title : Investigation of the Half-width of the Microwave Absorption Lines of Ammonia

Orig Pub : Optika i spektroskopiya, 1956, Vol 1, No 3, 374-377

Abstract : The inversion spectrum of ammonia in the region 2.10^{10} - 3.10^{10} cycles has been investigated. The effective collision diameters and the pressure dependence of the half-width of the line ν_0 in the region 10^{-1} - 10^{-3} mm/Hg have determined for the states J,K = 1, 1; 9, 8; 3, 3; and 4,4. For $p = 10^{-1}$ - 10^{-2} mm/Hg, $\Delta\nu$ varies in accordance with the empirical formula $\Delta\nu = 28p(288/T) \sqrt{K^2 / J(J+1)}^{1/3}$ (B. Eleaney and R.P. Penrose, Phys. Soc., 1948, 60, 546). At lower p agreement is impaired, apparently due to the Doppler effect. A decrease in $\Delta\nu$ was observed with decreasing intensity of the lines.

Card 1/2

- 27 -

MIKHAYLOV, I.G., kand. fiz.-mat. nauk; MYASHNIKOV, L.L., prof., nauchnyy
red.; VLADIMIRSKIY, D.M., red. izd-va; GURDZHIYVA, A.M., tekhn.
red.

[Ultrasonic waves and their application] Ul'trazvuk i ego primene-
nie. Leningrad, Ob-vo po rasprostraneniyu polit. i nauchn. znaniy
RSFSR, Leningr. otd-nie, 1958. 46 p. (MIRA 11:9)
(Ultrasonic waves)

L. L. MYASNIKOV, MOLCHANOV, A. P., E. M. GYUNINEN, A. V. MEL'NIKOV, A. P.
MOLCHANOV, V. N. RYBAKOV, F. I. SKRIPOV, M. M. FILIPPOV

"Results of Solar Eclipse Observations of 1952 and 1954 in the
3.2 cm Wavelength"

(Total Eclipse of the Sun, February 25, 1952 and June 30, 1954, Transactions
of the Expedition to Observe Solar Eclipses) Moscow, Izd-vo AN SSSR, 1954.
357 p.

MYASNIKOV, L. L.

"The Magnetoacoustic Effect."

paper presented at the 4th All-Union Acoustical Conf., Moscow, 26 May - 4 June 1958.

SOV/58-59-9-21644

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 9, p 234 (USSR)

AUTHORS: Molchanov, A.P., Gynninen, E.M., Mel'nikov, A.V., Molchanov, A.I.P.,
Myasnikov, L.L., Rysakov, V.N., Skripov, F.I., Filippov, M.M.

TITLE: Results of the Observations of the Solar Eclipses of 1952 and 1954 at
a Wavelength of 3.2 cm

PERIODICAL: V sb.: Polnyye solnechn. zatmeniya 25 fevr. 1952 g. i 30 iyunya 1954 g.
Moscow, AN SSSR, 1958, pp 331 - 332

ABSTRACT: The authors give the results of the radio observations of the solar
eclipses of 25 Feb. 1952 and 30 June 1954. The residual intensities
of the sun's radio emission amount to $< 4\%$ and 0.98% respectively.

Card 1/1

3

VOLKOV, V. V., MYASNENOV, L. L., NAUMOV, A. I., STROGANOV, V. V. (NERFI, Gor'kiy)

"Methods of Atom-Beam Radiospectroscopy".

report presented at the All-Union Conference on Statistical Radio
Physics, Gor'kiy, 13-18 October 1958. (Izv. vyssh uchev zaved-Radiotekh.,
vol. 2, No. 1, pp 121-127) COMPLETE card under SIFOROV, V. I.)

AUTHORS: Kolosov, A.A., Maslennikov, L.N.,
Myasnikov, L.L. 54-10-2-4/16

TITLE: The Stabilization of the Frequency of the Quartz Generator by Means of a Spectral Line (3,3) $N^{14}H_3$ (Stabilizatsiya chastoty kvartsevogo generatora posredstvom spektral'noy linii (3,3) $N^{14}H_3$)

PERIODICAL: Vestnik Leningradskogo Universiteta, Seriya fizika i khimiya, 1958, Vol. 10 Nr 2, pp. 38-42 (USSR)

ABSTRACT: In the present paper the method worked out by the authors for the stabilization of the frequency of a quartz generator by means of the microwave of absorption in gaseous ammonia is described. In order to stabilize the quartz generator the microabsorption line $N^{14}H_3$ (3-3) at a pressure of 10^{-2} mm mercury column was chosen. The application of gaseous ammonia is justified by the fact that the line (3-3) is well known and is easily accessible within the radiofrequency range. Besides, it is of high intensity and can therefore easily be observed in the small absorbing gas cells. Thanks to the exterior fields, the displacement of the spectral line is quite insignificant at normal conditions, and the insta-

Card 1/3

The Stabilization of the Frequency of the Quartz
Generator by Means of a Spectral Line (3,3) $N^{14}H_3$

54-10-2-4/16

bility of the order of 10^{-10} caused by it can be disregarded. Modern methods make it possible to obtain great stability of the shape of the line. For the purpose of stabilization a scheme of the automatic adjustment of the frequency of the quartz generator was used (fig. 1). The following factors influence the operational stability of the scheme: 1.) Stability of the shape of the line. 2.) Stability of the amplification coefficients of the amplifiers. 3.) Starting stability of the multivibrators. 4.) Modification of the shape of the modulating signal. 5.) Modification of the feed voltage. The stability of the shape of the line depends on the pressure in the gas cell (table 1). As already mentioned, the stability of the amplification coefficients of the amplifiers influences the operation of the scheme. If anode feed is modified by 10% a shift of 1 microsecond occurs, which corresponds to a deterioration of relative instability of up to $3 \cdot 10^{-7}$. The change of the shape of the line also manifests itself in the accuracy of operation of the system. If the frequency of the absorption line is more towards the end of the sinusoid, the line will change with respect to time. It was found by calculation that the most favorable point of operation is near the turning point of the sinusoid and that the permitted displacement is within the limits

Card 2/3

The Stabilization of the Frequency of the Quartz
Generator by Means of a Spectral Line (3.3) N¹⁴H₃

54-10-2-4/16

of $\pm 5^\circ$. In practice possible displacement was found to be greater, and deviations from the order $\pm 30^\circ$ are permitted. This may be explained by the fact that the modulating signal slightly differs from the sinusoid and has a longer linear part. In the case of a linear displacement by more than the half distance from the center, the recordings of the phase detector are modified by 0.2 V. There are 8 figures, and 1 table.

SUBMITTED: December 24, 1957

AVAILABLE: Library of Congress

1. Quartz generators—Frequency—Stabilization 2. Quartz crystals
—Applications

Card 3/3

MYASNIKOV L L

Содержание заседания с темой: регистрация ре-
сурсов

А. В. Пресс,
В. Ф. Губин

Исходные данные: тематика, результаты, планы
при регистрации ресурсов УВБ

А. В. Пресс,
Г. М. Сидоров,
В. В. Лавров

Заключительные указания: результаты при-
ема при записи ресурсов регистрации УВБ

(с 12 до 16 часов)

В. Ф. Губин

Об итогах работы: итоги, результаты, планы
по записи на фоне шума

В. А. Лавров

Параметры, связанные с аппаратурой: итоги,
содержание записи

9 июня
(с 16 до 22 часов)

44

С. М. Давидов (Членоведение)

Результаты преобразования и обработки по пре-
образованию

А. Г. Давидов

Результаты обработки: результаты, итоги,
исходные данные преобразования

В. В. Лавров

К записи: результаты, планы при записи по
указанию

18 июня
(с 10 до 16 часов)

А. А. Мазуров

Анализ: результаты, планы, итоги, итоги

В. В. Мазуров,
Г. С. Мазуров

Детализация: результаты, планы, итоги,
исходные данные

В. М. Туров

К записи: результаты, планы, итоги, итоги,
исходные данные преобразования

45

report submitted for the Centennial Meeting of the Scientific Technological Society of
Radio Engineering and Electrical Communications in A. G. Popov (VSEI), Moscow,
8-12 June, 1959

67530

24,2500

AUTHOR: Myasnikov, L.L.

SOV/141-2-3-7/26

TITLE: Methods in Atom-beam Radiospectroscopy ¹

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Radiofizika,
1959, Vol 2, Nr 3, pp 384 - 387 (USSR)

ABSTRACT: The basic instrument is that of Figure 1. Atoms emitted by the source Π pass through sections A and B in which non-uniform magnetic fields sort out the atoms according to the sign of the effective dipole moment. Between A and B there is a section C with a uniform magnetic field, at the beginning and the end of which there are resonators E_1 and E_2 , excited by a high-frequency source. Particles which traverse the entire system are collected by an ionization detector D. The whole assembly is evacuated. Figure 2 shows the passage of a beam through the system when the non-uniform fields are similarly oriented and the moments are directed into alternative states. The method is analogous to the optical one using a Foucault knife-edge and is similarly explicable in terms of refractive indices.

Card 1/3 Correct operation requires the resonators tuned and excited

67530

SOV/141-2-3-7/26

Methods in Atom-beam Radiospectroscopy

at the Larmor frequency. According to semi-classical theory an atom traversing a field system of the kind described has associated with it a directed wavelength depending on the velocity and frequency of effective dipole moment reorientation. This wavelength may be used to explain the mechanism whereby the moment is "tipped over" into the alternative state. Roughly speaking, at E_1 and E_2 , phase-shifts of $\pi/2$ are introduced. This corresponds to the Ramsey condition (Refs 1,2). The effective width of the resonance line is derived from the indeterminacy condition and is approximately equal to $1/2t_\alpha$, where t_α is the flight-time of an atom. In this method of spectroscopy the intensity distribution has an interference character, the widths of the bands depending on the flight-time between resonators. The expression, Eq (2), for the width of a "maximum" practically coincides with another of Ramsey's formulae. Careful adjustment of the resonators alters the shape of the

Card 2/3

67530

SOV/141-2-3-7/26

Methods in Atom-beam Radiospectroscopy

intensity curve (Figure 3) and offers the possibility of increasing the resolving power of the system. This feature was used by Rabi. The author thanks V.F. Volkov, A.I. Naumov and L.N. Khodaleva for their advice. There are 3 figures and 2 English references.

ASSOCIATION: Issledovatel'skiy radiofizicheskiy institut pri Gor'kovskom universitete) (Radiophysics Research Institute of Gor'kiy University) 

SUBMITTED: November 27, 1958

Card 3/3

6.8000 (3201, 1099) }
9.4300 (3203, 1043) } ONLY

S. 046/60, 006/003, 016, 017 XI
B013/B063

AUTHOR: Myasnikov, L. L.

TITLE: Acoustic Spin Resonance in Metals

PERIODICAL: Akusticheskiy zhurnal, 1960, Vol. 6, No. 3, pp. 347-351

TEXT: The present paper deals with theoretical problems of acoustic magnetic resonance in metals. Acoustic nuclear magnetic resonance occurs when the ultrasonic frequency is equal to or a multiple of ω_0 . Absorption of phonons having energies of $\hbar\omega_0$ or $n\hbar\omega_0$ disturbs the thermal equilibrium between the nuclear spins and the metal lattice and equalizes the occupation of the levels. The interaction between ultrasonic waves and atomic nucleus is considered to be a quadrupole interaction. The reestablishment of thermal equilibrium depends on the interaction between conduction electrons and local magnetic field. Acoustic magnetic resonance may be theoretically studied with the help of a semiclassical set of equations interrelating the occupation of the magnetic levels and the necessity of a relaxation mechanism. Such a study is described in Ref. 1 for another problem. The author makes use of part of the calculations
Card 1/2

ANDREYEV, Georgiy Leont'yevich; MYASNIKOV, Lev Leonidovich;
GORODEMSKIY, L.M., red.; GVOZDEV, V.A., ~~tekh.~~ red.

[Let's disseminate physical and mathematical knowledge
among the masses] Fiziko-matematicheskie snaniia - v massy.
Moskva, 1962. 34 p. (MIRA 16:3)
(Physics--Study and teaching)
(Mathematics--Study and teaching)

MYASNIKOV, Lev Leonidovich, doktor tekhn.nauk, prof.; DEMKOV, Yu.N.,
kand. fiz.-mat. nauk, nauchnyy red.; VOROB'YEV, G.S., red.izd-
va; GURDZHIYEVA, A.M., tekhn. red.

[Atomic clocks]Atomnye chasy. Leningrad, Ob-vo po rasprostra-
neniiu polit. i nauchn. znaniy RSFSR, 1962. 53 p. (MIRA 16:2)
(Atomic clocks)

S/058/63/000/003/035/104
A062/A101

AUTHOR: Myasnikov, L. L.

TITLE: Hyperfine absorption lines in atomic beams of alkaline metals

PERIODICAL: Referativnyy zhurnal, Fizika, no. 3, 1963, 44, abstract 3D300
("Tr. Leningr. korablistroit. in-ta", 1962, no. 35, 145 - 150)

TEXT: The author considers the problems of the quality factor and intensity of hyperfine absorption lines in atomic beams of alkaline metals and radioactive isotopes. Formulas are given for the width and intensity of the lines, and tables are presented containing the lines of the hyperfine structure of stable and radioactive isotopes.

[Abstracter's note: Complete translation]

Card 1/1

L 19903-63 EWT(d)/EWP(q)/EWT(m)/EWP(B)/FCC(w)/BDS AFFTC/ASD/ESD-3/
APGC Pg-L/Pk-L/Po-L/Pq-L GG/JD

ACCESSION NR: AR3007004

S/0058/63/000/008/H060/H060

SOURCE: RZh. Fizika, Abs. 8Zh387

38B

AUTHOR: Myasnikov, L. L.

TITLE: Simulation of touch by means of surface ultrasound waves

CITED SOURCE: Tr. Leningr. korablestroit. in-ta, vy*p. 36, 1962,
103-105

TOPIC TAGS: ultrasonic, touch simulation, artificial finger

TRANSLATION: The carrying capacity of a natural finger is calculated and also that of a model based on the use of surface ultrasonic waves in the megacycle band, flowing over the surface of a plate made of magnesium alloy. The calculation shows that the volume of information transferred by the artificial finger is 600 times larger than the volume transferred by a natural finger, and

Card 1/2

L 19903-63

ACCESSION NR: AR3007004

this indicates the promise afforded by the technical applications of
the method. D. Logvinenko

DATE ACQ: 06Sep63

SUB CODE: PH

ENCL: 00

Card 2/2

ARISTOV, Yevgeniy Mikhaylovich; ZORIN, D.I., kand. tekhn.nauk,
retsenzent; KLYUKIN, I.I., retsenzent; MYASNIKOV, L.L.,
prof., nauchn. red.; LESKOVA, L.R., red.; ERASTOVA,
N.V., tekhn. red.

[Physical quantities and units for their measurement]
Fizicheskie velichiny i edunitsy ikh izmereniia. Le-
ningrad, Sudpromgiz, 1963. 94 p. (MIRA 17:1)

MYASNIKOV, Lev Leonidovich; STASHKEVICH, A.P., kand. tekhn. nauk,
dots., retsenzent; KLYUKIN, I.I., nauchn. red.; KRYAKOVA,
D.M., tekhn. red.

[The inaudible sound] Neslyshimyi zvuk. Leningrad, Sudprom-
giz, 1963. 110 p. (MIRA 16:10)

(Sound)

KLYUKIN, Igor' Ivanovich; MYASNIKOV, L.L., doktor tekhn. nauk, prof.,
retsensent; SUKHOTIN, V.E., kand. tekhn. nauk, retsensent;
GORDON, L.A., nauchn. red.; VASIL'YEVA, N.N., red.;
SHISHKOVA, L.M., tekhn. red.

[Underwater sounds] Podvodnyi zvuk. Leningrad, Sudpromgiz,
1963. 141 p. (MIRA 16:8)
(Underwater acoustics)

L 27665-66 EWT(1)

ACC NR: AP6007632

SOURCE CODE: UR/0141/66/009/001/0072/0080

AUTHOR: Amosiyev, A. M.; Belyanina, V. F.; Myasnikov, L. L.ORG: Leningrad Ship-Building Institute (Leningradskiy korablestroitel'nyy institut)TITLE: Detecting atom beams used in frequency standard and radio spectroscopes

SOURCE: IVUZ. Radiofizika, v. 9, no. 1, 1966, 72-80

TOPIC TAGS: frequency standard, radio spectroscopy

ABSTRACT: An investigation is reported of the surface ionization of K, Rb, Cs atom beams by texturized W and Pt, and Ta atom beam by Pt and W oxide. The method and equipment of the investigation follow those of N. Ramsey ("Molecular Beams"), R. F. Minturn et al., J. Appl. Phys., v. 31, 876, 1960, and N. Simpson "Instruments for Scientific Investigations". A 10^{-7} -torr vacuum was maintained during the experiments. Plots of ionic current of K, Rb, Cs vs. ionizer temperature, thermionic emission vs. collector potential, Ta beam current vs. emitter temperature, ion-current transient time vs. emitter temperature, and W-oxide ion current vs. operation time at a constant emitter temperature are presented. The ionization coefficient (1.8%) of an electron-bombardment detector is much lower than that (90%) of a surface-ionization detector; however, the latter has the advantage of being practically inertialess. Maximum estimated ionization effective cross-sections are:

Card 1/2

UDC: 539.282

L 27665-66

ACC NR: AP6007632

for K, $2 \times 10^{-16} \text{ cm}^2$; for Hb, $6 \times 10^{-15} \text{ cm}^2$; for Cs, $8 \times 10^{-15} \text{ cm}^2$. Orig. art. has: 10 figures, 7 formulas, and 2 tables.

SUB CODE: 20, 09 / SUBM DATE: 07Jul65 / ORIG REF: 004 / OTH REF: 002

Card 2/2 B.U.

MYASHNIKOV, L.L. (Leningrad); MYASHNIKOVA, Ye.N. (Leningrad);
SEREBRYAKOV, G.A. (Leningrad)

"Tactile" transducer using surface ultrasonic waves. Akust.
zhur. 9 no.3:385 '63. (MIRA 16:8)

(Transducers) (Ultrasonic waves)

L 40945-65 EEC(b)-2/EWT(1)/EWT(m)/EWP(1)/EWP(b)/T/EWP(e)/EWP(t) Pi-4/Pq-4
IJP(c) GG/WH/JD

ACCESSION NR: AP5007305

S/0057/65/035/003/0542/0545

AUTHOR: Myasnikov, L.E.; Raygorodskiy, L.D.; Finagin, B.A.

TITLE: Investigation of the reflection of potassium, rubidium and cesium atomic beams from a quartz plate

SOURCE: Zhurnal tekhnicheskoy fiziki, v.35, no.3, 1965, 542-545

TOPIC TAGS: atom, potassium rubidium, cesium, reflection, diffraction, quartz crystal, ultrasonic vibration

ABSTRACT: The authors have investigated the reflection of K, Rb and Cs atoms from the polished surface of an X-cut quartz crystal. The atomic beams were formed in a constant temperature oven containing the alkali metal in the liquid state and provided with a collimating channel (dimensions not given), and the reflected atoms were detected by surface ionization on a tungsten strip. The attitudes of the oven and detector relative to the quartz reflecting surface could be changed without breaking the vacuum. The quartz crystal could be heated, cooled or excited to mechanical vibration at the resonant frequency of 980 ks/sec. The most efficient specular reflection (reflection coefficient from 15 to 20%) was obtained at a graz-

Card 1/2

L 40945-65

ACCESSION NR: AP5007305

ing angle of 3° . When the quartz reflector was heated from room temperature to 340°K the reflected beam became considerably more diffuse. When the reflector was cooled to 230°K , two diffraction maxima appeared (with the K and Rb but not the Cs beams) at reflection grazing angles of approximately 9° . These diffraction maxima disappeared and the reflected beam became slightly more diffuse when the quartz reflector was excited to ultrasonic vibration (amplitude 0.4 micron). Calculations of the diffraction by a two-dimensional grating representing the quartz crystal surface of atoms having de Broglie wavelengths corresponding to the 400°K oven temperature gave results that were not in agreement with the observed positions of the diffraction maxima. It is suggested that diffraction by the surface layer at small grazing angles may represent a case intermediate between Bragg scattering and diffraction by a two-dimensional grating. Orig.art.has: 5 figures.

ASSOCIATION: Leningradskiy korablestroitel'nyy institut, Kafedra fiziki (Physics Department, Leningrad Shipbuilding Institute)

SUBMITTED: 17Jun64,

ENCL: 00

SUB CODE: NP

NR REF SOV: 000

OTHER: 002

Card 2/2 p113

L 37152-66

ACC NR: AP6018056

tors which have not yet been investigated. ⁴ The magnetoacoustic effect was used to determine the limit of solubility of the solid solution during non-equilibrium dynamic solidification. The results obtained by the authors for the solubility of silicon in aluminum (0.48%) differed from the results published in the handbook, but was closer to the theoretical value. This report was presented by Academician B. P. Konstantinov 9 September 1965. Orig. art. has: 2 figures and 1 formula.

SUB CODE: 11,20/ SUBM DATE: 03Sep65/ ORIG REF: 003/ OTH REF: 001

Card 2/2 af

L 37152-66 EWT(l)/EWT(m)/T/EWP(t)/ETI LJP(c) JD/WW

ACC NR: AP6018056 (N) SOURCE CODE: UR/0020/66/168/003/0564/0566

AUTHOR: Myasnikov, L. L.; Zvorykina, R. A.

ORG: Leningrad Shipbuilding Institute (Leningradskiy korablestroitel'nyy institut) ⁵⁸₅₇ B

TITLE: Magnetoacoustic effect in aluminum alloys

SOURCE: AN SSSR. Doklady, v. 168, no. 3, 1966, 564-566

TOPIC TAGS: aluminum alloy, magnetoacoustic effect, acoustic absorption, torsional vibration, acoustic resonance, solid solution, grain structure

ABSTRACT: To check on the hitherto uninvestigated increase of the phase velocity and increase of absorption of torsional sound waves in alloys, the authors prepared aluminum alloys with different contents of iron impurity - of the order of tenths and hundredths of one per cent. Plates of equal dimensions were tested (130 x 7.5 x 2 mm), fastened precisely at the vibration node, tuned to odd harmonics, and excited by resonance with torsional oscillations from X-cut Rochelle salt crystals. The resonance curve was plotted by producing beats from two sound generators with a constant frequency difference of 50 cps. When a constant magnetic field was applied, the resonant frequency was different from that without a field. The relative change of phase velocity was determined from the change in the resonant frequency, and the damping of the torsional oscillations was estimated from the relative logarithmic decrement of the oscillation with and without the field. The results show that the magnetoacoustic effect depends on the grain dimensions, density, chemical composition, and other fac-

Card 1/2

UDC: 548.0: 535

ACC NR: AM6032614

(N)

Monograph

UR/

Myasnikov, Lev Leonidovich

Shipboard quantum electronics (Kvantovaya elektronika na sudakh) Leningrad, Izd-vo "Sudostroyeniye", 1966. 425 p. illus., biblio., index. 5000 copies printed.

TOPIC TAGS: quantum electronics, atomic clock, molecular generator, quantum generator, maser, solid state laser, ruby laser, semiconductor laser, laser application, SHIPBUILDING ENGINEERING

PURPOSE AND COVERAGE: This book is intended to acquaint technicians and scientists in the shipbuilding industry with the foundations of modern electronics and their application aboard ship. The author emphasizes problems of quantum electronics; he has tried to make the book accessible to general readers with a knowledge of mathematics, physics, and radio engineering within the scope of the curriculum of shipbuilding schools. The author regrets that he devoted too little space to the practical application of quantum electronics aboard ship. G. F. Drukarév, A. S. Ter-Pogasyan and B. A. Finagin read the manuscript and provided valuable comments and advice. There are 91 references: 35 Soviet and 56 non-Soviet.

TABLE OF CONTENTS

From the Author -- 3

Ch. I. Atomic beams -- 5

1. Deflection of atoms in a magnetic field -- 5

Card 1/5

UDC: 629.12:621.38⁵

ACC NR. AM5032614

2. Reflection of atomic beams -- 15
3. Excitation of atomic beams -- 28
4. Beam detectors -- 35

Ch. II. Atomic-beam radiospectroscopy -- 41

5. Hyperfine spectrum lines -- 41
6. Some methods of atomic-beam spectroscopy -- 45
7. The Ramsey method -- 55
8. Accumulation chambers -- 67

Ch. III. Atomic clock -- 73

9. Standard clock -- 73
10. Cesium standard clock -- 76
11. Thallium standard clock -- 80
12. Magnetic effects; interference at low frequencies; very weak magnetic fields -- 87
13. Rubidium variant; radioactive beams -- 91

Ch. IV. Gas radiospectroscopy -- 96

14. The molecule as a gyroscope -- 96
15. Oscillation-rotation interaction and centrifugal perturbation -- 104
16. The molecule in an electromagnetic field -- 111
17. Form and intensity of spectral lines -- 118
18. Widening of a spectral line; saturation -- 124

Card 2/5

ACC NR: AM603261A

- Ch. V. Interaction with fields. Radiospectra of some gases -- 131
 - 19. Stark and Seeman effects -- 131
 - 20. Quadrupole interaction -- 139
 - 21. Inversion spectrum -- 144
 - 22. Radiospectra of gases -- 155
 - 23. Radio-line comparator -- 162
- Ch. VI. Molecular generator; hydrogen generator; gaseous cells -- 172
 - 24. Molecular-beam radiospectroscopy -- 172
 - 25. Molecular generator. Basov-Prokhorov equation -- 178
 - 26. Excitation parameter -- 185
 - 27. Ammonium and other molecular generators -- 189
 - 28. Hydrogen generator -- 196
 - 29. Gaseous cells -- 208
- Ch. VII. Paramagnetic resonance -- 213
 - 30. Radio reception and amplification problems -- 213
 - 31. Paramagnetism -- 220
 - 32. Paramagnetic ions; paramagnetic resonance -- 230
 - 33. Level disintegration in the magnetic field; paramagnetic resonance in the ruby crystal -- 239

Card 3/5

ACC NR: AM6032614

Ch. VIII. Quantum amplifiers and generators -- 248

- 34. Three-level scheme -- 248
- 35. Four-level scheme -- 260
- 36. Paramagnetic amplifiers -- 265
- 37. Traveling-wave amplifier -- 267
- 38. Quantum amplifier noise -- 272
- 39. Noise temperature -- 277
- 40. Paramagnetic amplifiers (continuation of the survey) -- 284

Ch. IX. Acoustic masers -- 293

- 41. Supersonic sound -- 293
- 42. Sound quanta -- 299
- 43. The acoustic maser -- 304

Ch. X. Lasers

- 44. Characteristic features of a solid-body laser -- 312
- 45. Three- and four-level schemes -- 318
- 46. Ruby crystal laser -- 325
- 47. Gas lasers -- 331
- 48. Generation -- 335
- 49. Coherence -- 342
- 50. Interference -- 349
- 51. Semiconductor lasers -- 354

Card 4/5

ACC NR: AK6032614

Ch. XI. Application of lasers -- 359

52. Shipboard lasers -- 366

53. Depth echo sounding -- 366

54. Laser welding and other technological applications of optical quantum generators -- 370

55. Some new laser devices -- 374

Remarks and appendices -- 378

Index -- 420

Bibliography -- 423

SUB CODE: 09/

SUBM DATE: 20May66/

ORIG REF: 034/ OTH REF: 057/

Card 5/5

DOSYCHEV, A.V.; LOPATIN, S.A.; MYASNIKOV, L.M.; PLEKHANOV, N.A.; KONUKH, G.D.

Redesigning of the electric power supply network for carbide furnaces.
Prom.energ. 16 no.5:15-16 My '61. (MIRA 14:7)
(Electric furnaces)

MYASNIKOV, L.P.

It is urgent to organize mass production of new types of furniture.
Der. prom. 7 no. 6:1-3 Je '58. (MIRA 11:8)
(Furniture)

MYASNIKOV, L.P.

Let us manufacture new types of furniture. Der.prom. 8 no.4:1-2
Ap '59. (MIRA 12:6)
(Furniture industry)

MYASNIKOV, L.P.

Toward new successes in the struggle for the fulfillment
of the seven-year plan ahead of time. Der.prom. 9 no.1:
1-3 Ja '60. (MIRA 13:4)
(Woodworking industry)

POLAND/Acoustics.

J

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10130

Author : Balabukha, D.K., Myasnikov, L.S., Plotnikova, E.N.

Inst : Leningrad Shipbuilding Institute, USSR

Title : Modulation Method of Measuring Small Electric Voltages in the Audio Frequency Range.

Orig Pub: Acust. Zh., 1956, 2, No 3, 248-254

Abstract: Description of the application of the modulation method for the measurement of small voltages in the audio frequency range. The modulation is effected by means of periodic variations of a capacitor. An approximate method is indicated for calculating the input circuit of the circuit and the parameters of the modulators, and suitable nomograms for the purpose are given. A counter-phase circuit for connecting two modulators is proposed and yields simultaneously large values of modulation coefficients and voltage transfer coefficients. The method developed permits measurements against a background that exceeds considerably the intrinsic noise of the measuring portion

Card : 1/2

POLAND/Acoustics.

J

Abs Jour: Referat Zhur-Fizika, 1957, No 4, 10130

of the apparatus and raises the sensitivity of the instrument by
one order of magnitude compared with those usually employed at the
present time.

Card : 2/2

SEDYKH, A.; MYASNIKOV, M.; DEGTYAREV, V.

Using brigades in maintaining navigation installations in the
Irtysh Basin. Rech. transp. 19 no.4:40-42 Ap '60. (MIRA 14:3)

1. Nachal'nik Irtyshskogo basseynovogo upravleniya puti (for Sedykh).
 2. Glavnyy inzh. Irtyshskogo basseynovogo upravleniya puti (for Myasnikov).
 3. Nachal'nik sluzhby Irtyshskogo basseynovogo upravleniya puti (for Degtyarev).
- (Irtysh Valley--Signals and signaling)

MYASNIKOV, M.

Casting of paraffin rings with an automatic machine. Mest. 1962.
i khud. promys. 3 no.9:32 S '62. (MIRA 18:18)

1. Glavnyy inzh. upravleniya legkoy promyshlennosti Ispolnitel'nogo
komiteta Leningradskogo gorodskogo soveta deputatov trudyashchikhsya.

MYASNIKOV, M. (Leningrad)

An automatic machine does the casting. ~~Meat~~.prom.i kind. promys. 3
no.1:23 Ja '63. (MIRA 16:2)
(Leningrad--Foundries) (Machinery, Automatic)

DEGTYAREV, V., dotsent; MYASNIKOV, M.

Deposition of dams under the protection of temporary longitudinal structures. Rech. transp. 22 no.8:40-41 Ag '63. (MIRA 16:10)

1. Novosibirskiy institut inzhenerov vodnogo transporta (for Degtyarev). 2. Glavnyy inzh. Irtyshskogo basseynovogo upravleniya puti (for Myasnikov).
(Dams)

MYASNIACV, M.S.

KOSTRIKOV, V.S., kand.med.nauk; MYASNIKOV, M.S.

Fractures of the head of the femur and their treatment. Med.sestra
16 no.9:3-8 S '57. (MIRA 11:1)

1. Iz ukrainskogo nauchno-issledovatel'skogo instituta ortopedii i
travmatologii imeni prof. M.I.Sitenko..
(FEMUR--FRACTURE)

MYASNIKOV, M.S.

Congenital talipes. Med.sestra 17 no.1:9-14 Ja '58. (MIRA 11:2)

1. Iz Ukraineskogo nauchno-issledovatel'skogo instituta ortopedii i
travmatologii imeni prof. M.I.Sitenko.
(FOOT--ABNORMALITIES AND DEFORMITIES)

MYASNIKOV, M.S.

Workers of the Leningrad knit goods factory. Tekst.prom. 21
no.7:67-68 J1 '61. (MIRA 14:8)
(Leningrad--Knit goods industry)

MYASNIKOV, M.S.

Modernization of the OV-1 tricot knitting machines.

Tekst.prom. 22 no.10:54-55 0 '62. (MIRA 15:11)

1. Glavnyy inzh. Upravleniya legkoy promyshlennosti
ispolnitel'nogo komiteta Leningradskogo gorodskogo
Soveta deputatov trudyashchikhsya.
(Leningrad--Knitting machines)

1. MYASNIKOV, M. V.
2. USSR (600)
4. Dredging
7. Dredging in winter. Rech. transp. 12 no. 6: 1952

9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

MYASNIKOV M V

1. DOMANEVSKIY, N. A., Eng.; MYASNIKOV, M. V., Eng.
2. USSR (600)
4. Navigation - Dnieper Basin
7. Improvement of navigation conditions on rivers of the Upper Dnieper Basin.
Rech. transp. 13, No. 2, 1953.
9. Monthly List of Russian Accessions, Library of Congress, April 1953, Uncl.

KONOVALOV, I.M., professor; MYASHNIKOV, M.V., inzhener.

Using solar radiation to lengthen navigation seasons. Rech.
transp. 15 no.1:13-18 Ja '56. (MLBA 9:5)
(Inland navigation) (Ice on rivers, lakes, etc.)
(Solar radiation)

MYASNIKOV M.D.

Translation of the Russian text of the book "The Third All-Union Hydrological Conference in Leningrad, October 1957" published by the publishing house "Gidrometizdat", Leningrad, 1958, 2,000 copies printed.

Sponsoring agency: Glavnye upravleniye gidrometeorologicheskoy sluzhby pri Sovete Ministrov SSSR.

Resp. Ed.: V.A. Uryayev; Ed.: V.B. Protodkov; Tech. Ed.: M.I. Braymina.

PURPOSE: This work is intended for meteorologists, hydrologists, and hydrophysicists, particularly those engaged in the study of snow and ice and evaporation processes.

COVERAGE: This book contains papers on hydrophysics which were presented and discussed at the Third All-Union Hydrological Conference in Leningrad, October 1957. The Conference published 10 volumes on various aspects of hydrology of which this is number 3. The editorial board in charge of the series includes: V.A. Uryayev (Chairman), O.A. Alekin, Ye.V. Bliznyak (Secretary), S.I. Borovik, M.A. Valikanov, L.K. Davydov, A.P. Domantitskiy, G.P. Eshkin, S.M. Krititskiy, B.I. Kudelin, L.P. Mankin, M.P. Menkel, B.P. Orlov, I.V. Popov, A.K. Proskuryakov, D.L. Sokolovskiy, O.A. Spensler, A.I. Chebotarev, and S.K. Cherkavskiy. This volume is divided into 2 sections: the first contains reports from the subsection for the study of evaporation processes, and the second contains reports from the snow and ice subsection. References accompany each article.

Kolesnikov, A.G. [Professor, Doctor of Physical and Mathematical Sciences] and A.A. Pivovarov [Candidate of Physical and Mathematical Sciences] Computing the Rate of Autumnal Cooling Along a River

270

Braslavskiy, A.P. [Candidate of Technical Sciences, OOI Leningrad] Computing the Ice Regimen of the Northern Kazakhstan Lakes

276

Panov, B.P. [Docent, Candidate of Geographical Sciences, LOMI Leningrad] Long-range Changes in the Ice Break-up and Freeze-up Times of Rivers and Lakes and the Question of Extra Long-range Forecasting

287

Ginzburg, B.M. [Candidate of Technical Sciences, TsIP Moscow] Fundamentals of the Method of Long-range Forecasting of Ice Break-up on Rivers

296

Mezharovich, F.M. [Candidate of Geographical Sciences, OOI Leningrad] Unstable Ice Regimens on Rivers and Methods for Forecasting

302

Savchenkov, Ya.I. [Candidate of Geographical Sciences, TsIP Moscow] Long-range Forecasts of the Time of Ice Appearance on Siberian and Far Eastern Rivers

309

Prorin, A.G. [Candidate of Geographical Sciences, LOMI Leningrad] Atlantic Ocean Effect on the Types of Ice Cover and the Time of Ice Break-up for the Northwestern European Rivers

313

Piotrovich, V.Y. [Candidate of Technical Sciences], and M.P. Vinogradova [Candidate of Geographical Sciences] Basic Means for Determining a Method of Long-range Forecast of Freeze-up and Ice Clearance Times in Reservoir Projects

320

Monvalov, I.M. [Professor, Doctor of Technical Sciences] V.V. Balanin [Docent, Candidate of Technical Sciences], and M.I. Mcherbakova [Engineer, LII] Basic Problems in the Development of Ice Engineering

336

Myasnikov, M.D. [Chief Engineer, Omsk] An Attempt to Use Solar Radiation for the Needs of Water Transportation

333

Drozdov, D.G. [Engineer, Teploelektroproekt, Moscow] Regulating the River Discharge by Ice Reservoirs

341

MYASNIKOV, M.V., inzh.; DEGTYAREV, V.V., inzh.; ZAV'YALOV, M.Ya.

The work of suction dredge with a mechanical digger. Rech. trans.
18 no.8:48-49 Ag '59. (MIRA 12:12)

1.Irtyshskoye basseynovoye upravleniye puti (for Myasnikov, Degtya-
rev). 2.Komandir zemlesosa "Sormovskiy-10" (for Zav'yalov).
(Dredging machinery)

MYASNIKOV, M.V.; DEGTYAREV, V.V.

Analysis of the designs of regulatory structures and their construction. Rech.transp. 18 no.9:39-40 S '59.
(MIRA 13:2)

1. Glavnyy inzhener Irtyshskogo basseynovogo upravleniya puti (for Myasnikov).
2. Nachal'nik sluzhby puti Irtyshskogo basseynovogo upravleniya puti (for Degtyarev).
(Rivers--Regulation)

DEGTYAREV, Vladimir Vladimirovich; ~~MYASHNIKOV, Maksim Vladimirovich;~~
GOLOVUSHKIN, M.P., retsenzent; ~~LAPIN, M.I., retsenzent;~~
KHIZHOV, B.M., red.; FEDYAYEVA, N.A., red.izd-va; POKHLEBKINA,
M.I., tekhn.red.

[Mechanisation of regulation operations] Voprosy mekhanizatsii
vypravitel'nykh rabot. Moskva, Izd-vo "Rechnoi transport,"
1960. 155 p. (MIRA 14:3)
(Rivers--Regulation) (Hydraulic engineering--Equipment and supplies)

SEDYKH, A., inzh.; MYASNIKOV, M.,^V inzh.

Make fuller use of all resources for improving the transportation
system. Rech. transp. 19 no. 6:33-34 Je '60. (MIRA 14:2)
(Irtysh River--Regulation)

GOL'DBERG, O.D., kand. tekhn. nauk; MYASNIKOV, N.A., inzh.

Accelerated test of the life of three-phase asynchronous
motors. Elektrotehnika 35 no.10:24-26 O '64.

(MIRA 17:11)